

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF PENNSYLVANIA

UNITED STATES OF AMERICA	)	
	)	
v.	)	Criminal No. 18-292
	)	
ROBERT BOWERS	)	

**REPLY TO GOVERNMENT’S RESPONSE (ECF 1157) IN OPPOSITION TO  
DEFENSE MOTION TO EXCLUDE CERTAIN DNA EVIDENCE (ECF 1087, 1094)**

Robert Bowers, through counsel, replies to the government’s response to the defense motion to exclude the DNA test results for item 1(3) because the FBI DNA Laboratory consumed nearly the totality of the DNA material associated with item 1(3), consequently preventing Mr. Bowers from independently testing this evidence.

The government stakes its position on the hyper technicality and inaccurate premise that consumption in terms of DNA can only mean total consumption.<sup>1</sup> *See* ECF 1157 at 3 (claiming “the challenged sample was not consumed”). And it makes the inaccurate assertion that the defense “only begrudgingly acknowledges” this claim. *Id.*

The defense clearly and expressly articulated that the government consumed the DNA material in item 1(3). *See* ECF 1087 (Exhibit A) (defense expert Andrew McDonald stating that “the tube which would have contained the DNA extract was found to be empty,”

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<sup>1</sup> The government also makes the meritless claim that the defense motion is out-of-time. This Court ordered guilt phase motions *in limine* to be filed by April 3, 2023. This motion *in limine* to exclude evidence in the guilt phase was timely filed on April 3, 2023. Many, if not all, of the government’s motions *in limine* could have been filed well before April 3, 2023, yet the government chose to wait until the due date to file its motions. There is nothing improper about either the government or defense filing motions on the date they are due.

meaning that “there was no realistic possibility of generating a meaningful DNA result using the Next Generation Sequencing technique”). Defense expert Dr. Philip B. Danielson further confirmed Mr. McDonald’s finding and anticipated the government’s attempt at distorting reality:

While it may be argued that the testing of these items of evidence did not “technically” consume the DNA extract in its entirety (since 3  $\mu$ L should remain under ideal circumstances), this is a distinction without a difference. First, the concept that any DNA extract can be “totally consumed” is a theoretical concept as there is always the possibility that trace levels of DNA may remain as residue on the sides or tubes. In fact, it is not uncommon for labs to attempt retesting using apparently empty tubes from the DNA extraction process (as was attempted with sample 08NO3 in this case). By consuming at least 80% of each of the DNA extracts (consumed for a single DNA profiling test), the FBI Lab ensured that there would be an insufficient amount of DNA remaining for further successful testing relative to the results obtained by the FBI. This was confirmed by the attempted retesting of item 08NO3 by Cellmark Forensic Services.

ECF 1087, Exhibit B at ¶ 11.

The government makes the further inaccurate claim that the defense does not “specify what amount he believes was left after FBI testing (other than to acknowledge it was not zero)” and that “[t]his is notable because the amount of evidence left after Ms. Plaza’s testing of Item 1(3) would have been sufficient for the FBI Laboratory to conduct additional STR DNA testing.” ECF 1157 at 4 n.2. Dr. Danielson was clear that under “ideal conditions,” assuming “100% efficiency at every step in the DNA handling process (an unrealistic expectation), no more than 3  $\mu$ L of DNA extract would remain for independent testing.” ECF 1087, Exhibit B at ¶ 10. This amount of DNA extract, Dr. Danielson concluded, “for all intents and purposes, precludes further successful DNA testing/retesting.” *Id.* Dr. Danielson was referring not just to Next Generation Sequencing

testing, but also to STR DNA testing. The facts are clear that the FBI DNA Laboratory violated its own internal policy,<sup>2</sup> the standards of the relevant scientific community, and the directive of the American Bar Association. *See* ECF 1087, Exhibit B at ¶ 5 (quoting Second National Research Council Report, which stated that “the opportunity for independent testing (whenever feasible) should be prerequisites to the admission of laboratory findings”); *id.* at Exhibit C, Standard 16-3.4(b) (“A laboratory should undertake testing that entirely consumes DNA evidence or the extract from it without the prior approval of the prosecutor”). Rather than acknowledge error, the government makes the bald and meritless claim, without citation to any expert authority, that the DNA material was not consumed and that there was sufficient amount for defense independent testing. ECF 1157 at 4 n.2. The government does not and cannot refute the clear and well-supported declarations of Mr. McDonald and Dr. Danielson.

The government violated its Rule 16 obligation to produce a testable sample of the DNA material for item 1(3), and it does not and cannot refute the “fact that the DNA testing protocols employed by the FBI Lab were guaranteed to leave insufficient DNA for meaningful retesting would have been known to the analyst immediately after the DNA quantitation results were obtained.” ECF 1087, Exhibit B at ¶ 12. Nor can it refute the fact

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<sup>2</sup> In context, the FBI DNA Procedures Manual’s statement that consuming a sample “in its entirety” means “no original material or isolated DNA would remain” means that there is insufficient “evidence material and/or isolated DNA [] for potential future DNA testing.” It is unreasonable to read “in its entirety” to equate to the theoretical possibility, and practical unlikelihood, that any given tube would not have even trace levels of DNA material. The reasonable approach to understanding consumption of DNA material is that if there is not sufficient DNA material for independent testing, the DNA material has been consumed in its entirety.

that the defense is prejudiced by the lack of opportunity to independently test this evidence. The evidence in item 1(3) likely will be used by the government [REDACTED]. The FBI Laboratory's decision to consume the DNA sample for item 1(3) left the defense with no opportunity to independently test this evidence and counter the significant aggravating inferences that the government will push the jury to draw.

For item 1(3), Analyst Plaza's DNA report notes that the analysis conducted on the evidence involved a mixed sample, meaning, unlike a swab taken from a known individual, the sample is of unknown origin and the genotyping indicates that it may be associated with more than one person. Additionally, for item 1(3), the report claims the existence of a possible third contributor, unrelated to anyone to whom it was compared and with an unknown origin. Finally, item 1(3) is a low level/low template sample. The government appears to dispute this fact. *See* ECF 1157 at n.3. But Dr. Krane specifically identifies item 1(3) as having a low template level and notes that such samples "make interpretation challenging." ECF 1077, Exhibit C at ¶ 5. And courts recognize that low template samples demand greater scrutiny and are less reliable. *United States v. Grinnage*, 486 F. App'x 325, 330 (3d Cir. 2012) ("LCN [low copy number] testing might be less reliable than the typical PCR/STR method, especially where the proponent of the evidence seeks to prove a negative. This is because stochastic events can lead to phenomena such as 'allele dropout,' causing part of a profile to disappear. *See generally* John M. Butler, FORENSIC DNA TYPING 68, 167–70 (2d ed. 2005). Consequently, there may be cases where a *Daubert* hearing will be necessary to discern a minimum acceptable mass threshold, below which the

PCR/STR methodology is unreliable.”); *United States v. McCluskey*, 954 F. Supp. 2d 1224 (D.N.M. 2013) (results of low copy number (LCN) DNA testing were not sufficiently reliable to be admissible under *Daubert*).

Item 1(3) demands greater scrutiny because it is a low template mixed sample. But the government’s validation of the version of STRmix used to evaluate item 1(3) failed to account for a sample like item 1(3). As noted previously by the defense in its *Daubert* motion, the DNA test results for item 1(3) should be excluded because the results are outside the parameters of any validation study the FBI DNA Laboratory allegedly conducted on STRmix v2.4.05. And without any validation data that mirrors, or is beyond, the parameters of item 1(3), there cannot be any confidence that the test results for item 1(3) are reliable. *See* ECF 982, Exhibit A (Declaration of Dr. Dan Krane), at ¶¶ 13–14 (stating that the mixture ratio composition of sample 1(3) falls outside of the mixture ratios tested as part of the validation process for the FBI Laboratory’s use of STRmix v2.4.05 and that its application to this sample is invalid and unreliable due to the failure to validate v2.4.05 for samples with ratios like those observed in sample 1(3)).

Defense independent testing for item 1(3) is essential precisely because item 1(3) is a low template mixed sample and the test results are outside the parameters of the FBI validation study for STRmix v2.4.05, the version used to analyze item 1(3). Solely because the FBI analyst failed to follow FBI protocols, and the prosecuting agency in this case failed to heed the directives dating as far back as 1996 from leading governmental scientific organizations concerning the critical need to preserve the opportunity for independent testing of DNA evidence, the defense is left without the opportunity to independently test

this significant aggravating evidence. And now the government will use this unreliable evidence to argue to the jury additional aggravating circumstances that justify a guilty finding and death sentence. The government's conduct in failing to preserve and produce a testable sample for item 1(3) violates due process and fundamental fairness as guaranteed Mr. Bowers by the Fifth Amendment and violates Rule 16. The Court is well within its authority to exclude this evidence. *See* Fed. R. Crim. P. 16(d)(2) ("If a party fails to comply with this rule, the court may . . . (C) prohibit that party from introducing the undisclosed evidence; or (D) enter any other order that is just under the circumstances.").

To the extent that the Court applies the analysis in *Arizona v. Youngblood*, 488 U.S. 51 (1988), which requires that the defense show "bad faith" on the part of government actors, here the FBI DNA Laboratory (A) knew that item 1(3) was potentially significant evidence because [REDACTED], (B) knew before conducting its DNA analysis for item 1(3) that at most, under ideal conditions, 3  $\mu$ L of extract would remain for defense testing, and (C) knew that 3  $\mu$ L of extract would be insufficient for independent testing. Yet, the FBI DNA Laboratory proceeded with its testing, violating its own protocols and the directives of the relevant scientific community, knowing that the defense would not be able to independently test the evidence. This is not mere negligence; it is evidence sufficient to show bad faith. The government's conduct with respect to item 1(3) violates Rule 16 and denies Mr. Bowers' right to due process. The Court should bar the government from using evidence of item 1(3) at trial.

Respectfully submitted,

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